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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,009	06/28/2001	Kent Johnson	HAR63 610	6392

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EXAMINER

CONTEE, JOY KIMBERLY

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/893,009	Applicant(s) JOHNSON, KENT	
	Examiner Joy K Contee	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/15/01 & 12/2/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following informalities: in line 10 of the claim there is typographical error, i.e., a period is after "and". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Salvage et al. (Salvage), U.S. Patent No. 4,806,888.

Regarding claim 1, Salvage discloses in a power detector for a radio frequency wireless communications transmitter with a controllable transmitted power level in which a sampled signal is provided via a plurality of matched cascaded elements to a plurality of diode detectors, the output signals from which are summed to provide a control signal for the transmitted power level, the improvement wherein the cascaded elements are passive (col. 2, lines 29-38 and lines 50-68 and see Fig. 2).

Regarding claim 2, Salvage discloses the power detector of claim 1 wherein said cascaded elements are attenuators (col. 3, lines 39-44).

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Regarding claim 3, Salvage discloses the power detector of claim 2 including an amplifier upstream of said cascaded attenuators (col. 2, lines 44-61).

Regarding claim 4, Salvage discloses a power detector for controlling the transmit power level of a communications device comprising: plural cascaded attenuators for receiving a signal representative of the transmit power level of a communication device and for providing plural attenuator output signals; plural diode detectors each receiving one of the plural attenuator output signals to thereby providing plural detected signals; a summer responsive to the plural detected signals for producing a control signal having a voltage proportional to the power transmit power level of the communications device; and, a control unit for adjusting the transmit power level responsively to the control signal (col. 2, lines 29-38 and lines 50-68 and see Fig. 2).

Regarding claim 5, Salvage discloses the power detector of claim 4 wherein said plural attenuators comprise a printed thin film successive pad cascade (e.g., reads on fabrication using gallium arsenide substrates) (col. 4, lines 31-40).

Regarding claim 6, Salvage discloses the power detector of claim 4 wherein said plural attenuators each have substantially the same ratio-metric properties (col. 4, lines 8-25).

Regarding claim 7, Salvage discloses the power detector of claim 4 further comprising plural buffers (amplifiers) connected one each between one of said plural detectors and said summer to thereby increase the d.c. input impedance and improve the sensitivity of the power detector (col. 4, lines 9-19).

Regarding claim 8, Salvage discloses the power detector of claim 4 further comprising plural high gain operational amplifiers (e.g., differential amplifiers 16 and 17) connected one each between each of said buffers and said summer (col. 2, lines 44-61 and see Fig. 2).

Regarding claim 9, Salvage discloses the power detector of claim 8 wherein said plural operational amplifiers include portions of a common monolithic substrate (i.e., reads on MMIC) (col. 1, lines 46-52).

Regarding claim 10, Salvage discloses the power detector of claim 4 further comprising an amplifier for the signal representative of the transmit power level upstream of said plural attenuators (col. 2, lines 44-61 and see Fig. 2).

Regarding claim 11, Salvage discloses a power detector for controlling the transmit power level of a communications device comprising: means for providing a power level signal representative of the transmit power level of the communication device; passive means for dividing the power level signal into plural power level signals; means for detecting a characteristic of each of the plural power level signals to thereby provide plural detected signals; and means for summing the plural detected signals to thereby provide a control signal (col. 2, lines 29-38 and lines 50-68 and see Fig. 2)..

Regarding claim 12, Salvage discloses a power level control circuit for a communications device comprising: a communications device having a transmitted power level control; a detector for providing a power level signal representative of the transmit power level of said communication device; a passive signal divider for dividing the power level signal into plural power level signals; a unidirectional circuit for detecting

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a characteristic of each of the plural power level signals to thereby provide plural detected signals; an adder for summing the plural detected signals to thereby provide a control signal to said power level control(col. 2,lines 29-38 and lines 50-68 and see Fig. 2).

Regarding claim13, Salvage discloses in a method of detecting the transmit power level of a communication device wherein a signal related to the signal transmitted by the communication device is divided by a plurality of cascaded elements into plural components, and wherein a characteristic of the components is detected and summed to provide a signal related to the power level of the communications device, the improvement wherein the division is accomplished using only passive circuit elements (col. 2,lines 29-38 and lines 50-68 and see Fig. 2).

Regarding claim 14, Salvage discloses a method of controlling the transmit power level of a communication device comprising the steps of: a. providing a power level signal representative of the power level of the signal transmitted by the communication device; b. attenuating the power level signal with a successive cascade of attenuators to thereby provide a plurality of attenuator signals; c. detecting a characteristic of each of the plurality of attenuator signals to thereby provide plural detector signals; e. summing the detector signals to provide a control signal; and f. controlling the transmit power level of the communications device responsively to the control signal (col. 2,lines 29-38 and lines 50-68 and see Fig. 2).

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Regarding claim 15, Salvage discloses the method of claim 13 further comprising the step of amplifying the power level signal prior to dividing the power level signal (col. 2, lines 44-61).

Regarding claim 16, Salvage discloses the method of claim 13 further comprising the step of amplifying each of the detector signals prior to summing (col. 2, lines 1-38).

Regarding claim 17, Salvage discloses in a method of controlling the power level of a radio frequency transmitter wherein the level of power is detected by sampling the transmitted signal, the sampled signal is divided, a characteristic of each of the divided signals is detected by a unidirectional device, and the detected signals are summed to provide a control signal, the improvement wherein the sampled signal is divided prior to detection without using active circuit elements (col. 2, lines 29-38 and lines 50-68 and see Fig. 2).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hulkko, U.S. Patent No. 4,998,078, discloses a dividing cascade network for a support station in a radio telephone network.

Inagaki, U.S. Patent No. 6,603,596 discloses gain and signal level adjustments of cascaded optical amplifiers.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K Contee whose telephone number is 703-308-

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0149. The examiner can normally be reached on M (alternating), T & Th, 5:30 a.m. to 2:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703-305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JC
11/16/04


JOY K. CONTEE
PATENT EXAMINER